INSIDE THE STATES: BUILDING - UP LOCAL MANAGEMENT MODELS FOR TERRITORIAL SUSTAINABILITY

PALABRAS CLAVE: SUSTENTABILIDAD TERRITORIAL. MODELOS DE GESTIÓN. RESTRICCIONES INSTITUCIONALES

Jorge L. Karol [1]
www.iipac.unlp.edu.ar; email: jorge.karol@gmail.com;
Tel: +54 (911) 5463 1305

Conference Topic D: How to build a new type of participation - partnership between the territory players. Contribution

Summary :
Territorial intelligence requires (is based on) powerful constructive interactions among actors with diverse backgrounds and who influence and control different types of knowledge and resources. The paper explores some critical constraints which may preclude the States from fully contributing to these types of environments and suggest strategies to build-up effective interfaces.

Keywords: territorial sustainability. Management models. Institutional constraints

Resumen :
La Inteligencia Territorial requiere que actores con diferentes pertenencias y perfiles que inciden o controlan distintos tipos de conocimientos y recursos, desarrollen entre sí interacciones constructivas y potentes. El artículo explora algunas restricciones críticas que suelen entorpecer la capacidad de los Estados para participar plenamente en este tipo de emprendimientos y sugiere estrategias para la construcción progresiva de interfases efectivas.

[1] Thanks are due to a group of reviewers at 8th International Urban Planning and Environment Association Symposium at University of Kaiserslautern, Germany (March 2009) for their valuable critical comments on a previous version of this paper.

INSIDE THE STATES: BUILDING - UP LOCAL MANAGEMENT MODELS FOR TERRITORIAL SUSTAINABILITY

PALABRAS CLAVE: SUSTENTABILIDAD TERRITORIAL. MODELOS DE GESTIÓN. RESTRICCIONES INSTITUCIONALES

I. Introduction

Addressing Territorial Intelligence (i.e., steering territories' growth towards more sustainable collective development patterns) implies a complex planning and management agenda. At whatever jurisdictional level they might operate (federal, metropolitan, provincial, municipal or communal), States are key, inalienable actors of those transformational processes, which often require high political responsibilities, consistent public policies and operational capacities of introducing / negotiating coherence, consistence and convergences between multiple interests, pressures and demands. Participating into these strategic transitions requires from States to develop specific management models, which are seldom present today. Indeed, there is little evidence that such concerns actually enter into planning and decision-making processes in developing countries in Latin America. Instead, prevailing governance settings actually enhance and (re)*produce* non-sustainable territories and deepen differential vulnerabilities.

For States to set up this agenda – which includes coping with the socially uneven distribution of risks, uncertainties and vulnerabilities - starts by acknowledging the highly complex nature of those processes which take place and configure territories as well as the transversal and longitudinal networking needs of planning. Building-up this agenda requires specific territorial governance and management models.

The paper proposes that the design and implementation of these models should be purposefully and progressively built-up by integrating research and assessment into increasingly transversal decision-making processes within and between public agencies. These types of integration are both extremely necessary and particularly difficult. The production, development and implementation of these relational networks through communities of practice – in fact, boundary organizations (Guston et al., 2000) – may foster the progressive construction of territorial governance arrangements, through which adequate institutional settings (i.e., management models) oriented to effectively steer transitions towards urban sustainability may be progressively built-up.

The 'governance setting which may contribute to build-up management models' in local urban contexts does not respond to automatic loops; instead – and although much more sophisticated - it is roughly based on the same principle behind the machine-tool: a given "A-type" of organization which is required for building a new and original "B-type" organization, both of them corresponding to local and historical specificities. These interactive constructions of efficient management models may not only *constitute* sustainable urban programs and projects but – it is strongly suggested - also act as their *feasibility* conditions.

2. Incorporating flexible and sustainable organizational patterns into States' management models

States' management model can be analyzed through (a) the conceptual approaches to the systemic character of territories and of their sustainability; (b) the way in which the nature and connectivity of territorial planning-related subsystems, objects and issues are conceived; (c) the form of articulation and degree of consistence of the purposes, goals and objectives pursued; (d) its governance setting, which includes the rules and arrangements that connect those social actors who drive main structuring processes at regional scales; (e) its strategic orientation towards mounting sustainable trajectories and their continuity along the medium range; (f) the organizational formats of (and the relative hierarchy and connectivity between) its technical, administrative, financial, managerial and decision-making agencies (including the production, circulation and management of information and scientific knowledge); (g) the consistence among the prevailing planning cultures in diverse technical sectors and jurisdictional levels (Karol, Suárez, 2007).

General planning recommendations have recently addressed this issue, by suggesting key concepts such as "mainstreaming 'sustainability' into local urban planning agendas", "fostering transversal coordination among governments' technical agencies and divisions", "Institutional strengthening", "Non-competitive cooperation", "Action guides", Lessons

learnt", 'good practices", "networking", "interdepartmental cooperation", 'institutional flexibility". However, they may well become abstract goodwill-oriented objects when the time comes for implementing them at local levels.

The implicit belief in "the magic effect of discourse" (*if it can be enunciated, it exists and it will occur*) does not adequately address differential social vulnerabilities or conceptual/ organizational/ political asymmetries associated to the construction of planning and decisional – managerial mechanisms that may effectively mainstream sustainability into local planning agendas. In fact, the low visibility of micro-level obstacles to building-up those capacities and models at local levels distorts the political *change management* question it involves. Considering the 'transversal coordination' issue - and assuming that all involved stakeholders may have agreed on (or may have been commanded to) 'planning and working in a coordinated manner' - the following obstacles to coordination are frequently posed: (a) what exactly does it mean for each one of us to think and/or act coordinated?; (b) is it coordinate "with" or coordinate "to"?; (c) who will coordinate whom? (d) why should we do it? Our own office/ agency / sector controls all that is required for this (object) to work as it should; (e) what will each one of us gain or loose by sharing 'our' information, resources, technicians, budget?; (f) how should we do it?; (g) what other modifications (legislative, budgetary, organizational, communicational, training) should also take place for us to be able to coordinate our programs and actions?; (h) which are all the appropriate jurisdictional levels where these modifications should be produced?; (i) are these transformations actually feasible and desirable?; (j) In the limit, is there a consistent local urban planning agenda into which we could co-ordinately mainstream sustainability?

It is apparent that the road to the actual implementation of those elusive (global) discourses is undermined by broad sets of (local) weaknesses, limits and constraints which stem out of political, economic, historical and cultural roots. Thus, implementation of local sustainability agendas implies a complex institutional construction for supporting the active and deliberate reorientation of State's capacities for 'thinking systemically' (E. Morin, 1999), as well as for guiding and leading collective social processes.

3. What local institutional frameworks do these global discourses interact with? A brief diagnosis of management models and institutional capacities.

Many Latin American developing countries have set up their currently prevailing institutional management frameworks during the installation of their State-driven import-substitution industrialization models. After several significant political and organizational transformations (which also include the deep and radical market-driven 'State Reforms' fostered during the 90's and recent recognition of the need for States to foster relational and transversal links among its diverse agencies), those public institutions which converge (in subjects, territories, times and policies) in addressing or managing urban structuring and evolution can now be characterized by seemingly chaotic multiplicities and fragmentations, redundancies and emptiness, as well as by contradictory, conflictive and even divergent goals, rationalities and speeds, inherited from the contradictory coexistence of several cumulative 'institutional layers'. The usually conflictive superposition of various jurisdictional scales and sectoral and administrative agencies is aggravated by their institutional disconnections, which are based on the survival of technical / departmental cleavages (typically traditional-type organizations, corresponding to those settled during the founding periods) and also conceptual and ideological disarticulation between policies – even those ones programmed by a same governmental area.

The persistence, reproduction and extension of institutional inconsistencies and redundancies, as well as of fragmentations and conflicts between social actors' rationalities, hinder integrated and systemic approaches to territorial planning and management. The occurrences of these barriers and constraints to integrated management of sustainability have a quasi-fractal character. Their manifestations can usually be identified and recognized at every single point of the logical sequences that connect – from macro to micro, from operational to political levels and vice-versa – all components and modules of any given urban management model.

The interactions between (a) conceptual frameworks that minimize the systemic character of urban sustainability and its drivers and (b) the organization of disintegrated managerial systems, is reflected in prevailing planning styles and emphases as well as in the institutional design and the operational dynamics which result from them. Even when 'transversal vocations' are eventually put in place, the various components that structure actual management models

produce separate (or rather, indifferent) diagnoses and plans; thus, sectoral 'technical' or 'expert' diagnoses inevitably formulate isolated questions and produce disconnected and/or irrelevant and trivial answers, remedies, proposals and interventions. Hence, it can be argued that the nature of the barriers for formulating and implementing consistent and sustainable strategic decisional processes and interventions in relation to urban sustainability is more of a cultural and political nature than a properly technical one, at all jurisdictional scales and in all components of management models (Karol, Suárez, ibid.)

In these types of institutional settings, conducting successful transitions towards sustainable urban growth – or, in other words, mainstreaming sustainability into urban planning agendas - poses two significant challenges. The first is of a conceptual - technical nature and deals with understanding the systemic nature of both territories and of their transitions towards sustainability, i.e., *building the object*. The second is of a political – organizational - managerial nature and refers to the articulation of that comprehension into the design of future territorial agenda and policy formulation, by building up appropriate institutional capacities and transversal governance settings that enable States to lead those transitions, i.e., *building the action*.

Even if this might seem obvious, it is worth stressing that *building the object* is a prerequisite for *building the action*.

Historical experiences and attempts to build-up these capacities evidence a growing recognition of the need for transversal planning and management. However, it is also true that this same history is crossed by conflictive superposition of institutional and management arrangements, political reluctances and oppositions, successive fractures, interruptions, discontinuities and – finally – failures and backwards steps. Also, many of these experiences do not seem to have left significant institutional learning. The ways in which some cross-cutting attempts are approached also suggest that the ability to take advantage of learning eventually generated through critical analyses of precedent experiences may also decrease (destructive 'un-learning').

Analyses of several institutional settings built for managing adaptation to climate change in coastal areas, flood management and installation of early warning systems, reduction of differential social vulnerabilities at micro-regional levels, inter-municipal consortia and metropolitan areas in Argentina, have contributed to identify typical sets of barriers and critical factors which hindered the effective fulfilment of institutional coordination and articulation functions. These can be tentatively grouped as follows (Martin et al., 2004):

3.1. Inter-institutional asymmetries and vulnerabilities: these refer to contradictory (i) political agendas, (ii) institutional architectures, (iii) infrastructure, equipment, staff and installed capacities related to the production of information.

3.2. Critical incompatibilities among network's participants: (i) contradictory operational standards and specified procedures; (ii) different institutional designs, dependence levels and degrees of autonomy; (iii) non-coordinated procedures and quality protocols for information production, storage, circulation and distribution; (iv) disparities in formulation capacities; (iv) disproportional availability of highly skilled human technical resources.

3.3. Shortcomings in budget planning: (i) structural budgetary deficits; (ii) budget remains fixed while financial demands grow ;(iii) urgent demands prevail over programmed activities; (iv) public agencies prioritize own internal current expenses: hence, budgets seldom include coordination activities; (iv) investment policies are discontinuous;(v) budget applications are highly dependent on multilateral credit agencies' specifications; (vi) incompatibility in equipment's (hardware) requirements and standards, (vii) lack of regional integration (when more than one territorial authority is involved); (viii) low presence of technical groups in political negotiations about co-participatory budget schemes.

3.4. Constraints in budget execution: (i) incompatible rationalities among participants; (ii) insufficient or untimely availability of funds; (iii) presence of inadequate representatives in negotiations referred to budgetary priorities.

3.5. Institutional organization: (i) high institutional disarticulation; (ii) institutional fragmentation, conflictive overlapping and lack of coordination; (iii) non-consensual sectoral diagnoses which minimize the need of participation of other stakeholders; (iv) discontinuities (of policies, of representatives, of technical staff) along time; (v) absence of medium and long range provisions in most sectoral or territorial agencies.

3.6. Performance of management models: (i) partial sectoral views, interests and capacities prevail over systemic appreciations (thus, 'partial' solutions tend to become or build new risk factors); (ii) absence of environmental or social considerations in 'technical' agencies devoted to physical or territorial issues; (iii) very low visibility of environmental risks

and differential social vulnerabilities; (iv) low capacities to integrate 'social' policies into broader agendas.

3.7. Vulnerabilities in transversal ('sector-connecting') programs: In all of these planning endeavours – be they inter-sectoral, inter-jurisdictional or inter-institutional - (i) sector-based approaches prevail over systemic views and conceptions; (ii) 'traditional'-type institutional arrangements tend to prevail over 'innovative' managerial approaches; (iii) rational-functional management models prevail over strategic models; (iv) corporate-bureaucratic logics prevail over transversal management rationalities; (v) short range prevails over medium and long range;(vi) some disciplines / technical skills / types of agencies / jurisdictions / social actors strongly prevail over some others, even when this is not specified in formal coordination procedures and/or decision protocols; (vii) urban scientists and technicians usually lack the capacities (or the authority) to intervene in political phases of decisional processes; (viii) management rationalities are not oriented to (or do not have the authority, abilities or normative capacities for) building strategic and operational consensus among frequently contradictory interests, visions, resources, purposes, logics and timings.

These typical constraints have affected the possibility - for independent offices at State agencies involved in mandates equivalent to 'mainstreaming Sustainability into the public planning agenda' or any other mentioned above - of setting up operational connections among them. Even though institutional connectivity also enjoys a long (and many times successful) trajectory, it is not until very recently that the 'building-up of transversal connections' became an independent research object by itself in Latin American fora (Cunill Grau, 2005). The crucial difference between 'historical' connectivity attempts (circa 1960) and the more recent ones lies on the fact that the former ones had explored answers to the question of "how could (what kind of) interactions between us improve joint operations", while the latter ones - now aiming to recovering States' steering capacities (at both local ad regional levels) - are rather an arduous response to deliberate market-driven fractures of the State apparatuses (following the State Reforms of the 90's).

4. Operation, performance and construction of management models: 'perverse' and 'virtuous' examples.

Some examples will illustrate the way in which non-sustainable territorial strategies are built-up through institutional disconnections.

4*.1. Organizational degradation of an inter-institutional Coordination Function.* Created in 1999 within the Ministers' Cabinet Headquarters with the mission of avoiding or reducing impacts generated by natural or anthropic-based emergencies in Argentina, the Federal Emergencies System (SIFEM) was explicitly defined as a "coordination unit", a strategic 'liaison' node, i.e., not properly an Office or Agency but an "organizational scheme of National State which articulates pertinent national public agencies and coordinates their activities with provinces, municipalities(…) in order to prevent and efficiently manage emergencies or natural or anthropic disasters" and to make the best possible use of capacities and resources of various agencies of federal state. During its first three years, SIFEM developed innovative management modes, strengthened the State's resources, capacities and abilities to manage complex socio-environmental situations by facing extreme events risks with systemic risk management approaches. SIFEM started thereafter a period of continuous institutional transfers, degradations, successive changes in its functional dependence and authorities implied for SIFEM severe policy and management model's restrictions. Indeed, it shifted from effectively acting as 'liaison´ towards a subsidiary and secondary role, with a degraded position in the State structure, beside Civil Defence and extremely reduced planning and prevention capacities. (*Natenzon, Viand, 2005*)

4*.2. Institutional fracture of a micro- region.* La Plata is the medium-sized (c.800, 000 inhabitants) capital city of Buenos Aires Province. Located on a plain by the River Plate, originally connected by railroad to the country's capital (the city of Buenos Aires), it is the site of provincial administration, several higher education institutions, shipyards, a harbour, railroad components' factories and workshops, concentration markets, oil distilleries. It operated as a crucial external and internal transportation node. The city included two important industrial areas: Berisso and Ensenada, *locus* of all transport-connected and oil distillery/refinery activities. The whole set operated under an integrated compact territorial setting until 1957, when a military government separated Berisso and Ensenada from La Plata (and between them). This political separation led to a territorial and functional fragmentation among three municipalities (representing 7%, 11% and 82% of total micro-regional population) have independent administrative authorities, land use zoning and transport regulations, environmental standards and rules, etc. The frequent conflicts associated with this institutional fragmentation and 'triplication' of non-coordinated environmental and territorial planning offices - each one with

organizational structures, normative and regulatory standards and cultures of their own - severely hinders joint planning in search of a more sustainable integrated territorial development of three closely interconnected areas. In this case, the 'perverse' practice is not the mere *existence* of fragments but the processes through which these fragmentations had been purposefully *built-up*.

4.*3. Continuous organizational demotion of municipal planning functions.* The institutional design of given organizational structures establish who leads strategic and operational tasks and who others should coordinate their visions, capacities, resources and activities in order to achieve pursued outcomes. Operational structures determine priorities, hierarchies and coordination levels and standards. The whole structural set expresses the institutional *rationality* which impact upon both the ways in which territory becomes organized and its sustainability levels.

After several unsuccessful attempts to recompose a complex regional unit as the original La Plata Micro Region, the city's main offices devoted to designing, planning and regulating city's growth and development are kept separated and disconnected between them, as well as under the authority of diverse operational departments. Systemic views are replaced by fragmented perspectives; the function of "thinking the city" lies on institutions external to municipalities, with scarce or no formal links among them. The municipal organizational structure of La Plata underwent three successive modifications along 1996 through 1998, none of which positions the Land Use and Mobility planning offices at functional or hierarchical levels that makes 'planning' feasible of effective. Urban Planning and Development occupies a 3rd level (Undersecretary) position. None of four General Directions located at 4th level – Transport, Transit, Public Works and Environmental Policy – hold planning functions but Planning Direction (5th level) is under - and hence, subject to or depending on - Public Works. Areas which should be coordinated by Planning Direction are located at its same hierarchical level or simply above it. There is a Vice Direction of Urban Planning and Development (6th level), which contains two departments (7th level): Planning and Urban Design. Curiously enough, responsibilities for "organizing urban transformation plans and projects" in order to ensure the fulfilment of general Land Use Plans' objectives" does not correspond to the Urban Planning but to the Urban Design Department. Thus, planning offices are either at the same level than or subordinated to those same areas which they should coordinate; the hierarchical position of planning function is one of the lowest ones, and counts with scarce technical, economic and human resources. (Domnanovich, Agost, 2008).

4.4. ***Governmental un-learning.*** Two recent severe and successive flood episodes in Santa Fe, Argentina (2003 and 2005) – allegedly related to the continuous destruction of original forests (*'montes'*) for expanding soy plantation - are illustrative of un-learning processes. Weak, late and disarticulated responses to the first Salado River flood which invaded ¼ of the urban centre (2003) eventually contributed to turn it into a huge social-urban disaster, with serious long-lasting impacts (about 100,000 persons had to evacuate their homes and places). The institutional responses to the second flood, two years later, were even much weaker and much less coordinated. Personal communications exchanged at NWP Conference (ibid.) proved that these types of un-learning processes had indeed occurred also worldwide, at both 'developing' and 'developed' countries (Herzer et al., 2004; Lara, 2005)

4.5. ***Matanza-Riachuelo: Fragmentation and discontinuities within a a river basin***. In 2002, Management Committee for the Matanza-Riachuelo River Basin attempted to implement a harmonization agreement related to Land Use planning among the 16 municipal jurisdictions which share a 2,240 km2, 5.0 M inhab. basin. Land Use regulation is the normative basis upon which all economic activities and population's daily life *take place*. This harmonization involved (a) generate consensus around the objectives of a basin strategic plan; (b) coordinate policies and investments derived from this plan;(c) manage critical common services; (d) define new sectoral policies through participatory processes involving key stakeholders. Agreeing on common patterns for defining and making these regulations compatible was the major goal of this endeavour, aiming at developing articulation spaces, defining shared decision-making formats and processes. This goal has never been achieved, for municipal authorities not only refused to articulate regulations but even to share basic territorial information concerning their own jurisdictions. A new Basin Authority created in 2007 could not yet address this objective, due to the extreme political and institutional fragmentation within and between jurisdictions which converge on a highly degraded basin.

Most visible 'virtuous' examples of State – driven territorial planning and management worldwide correspond to two metropolitan areas: Paris and Curitiba. Their planning agencies (APUR and IIPUC, respectively) with more than 40 years of continuous existence are clear illustrations of the building-up an

integrated response by complex actors, through highly intensive inclusive and participatory processes. What basic organizational characteristics turn these last two cases into "virtuous" ones and distinguish them from traditional, fragmented, 'perverse' urban management models?

- Political primacy of planning function
- Strategic and political orientation of anticipatory, long range planning
- Adequate Science/ Policy interfaces, integrating knowledge-based interventions into political orientation
- Centralization of planning and coordination functions
- Integration of and coordination between diverse (city / region / metropolitan area) territorial scales
- Active representation of key public and private stakeholders - at their highest political decisional levels
- Orientation towards sustainability
- Adequate funding for planning and coordination functions

Can these capacities be also built-up in lower scales Territorial Intelligence endeavours and accompany States in joining a collective actor? How can these transversal spaces of cooperation, transference and continuous learning and experimentation be built among local actors when one of them (States) must learn to build these same transversal spaces within its own heterogeneity?

5. Boundaries, borders and the micro-physics of bridging governance gaps: two critical interfaces.

A brief review of both 'perverse' and 'virtuous' examples suggests some keys for further exploration. It seems apparent that the accurate perception of the complex nature of urban/regional systems is consistent with (a pre-condition of?) the possibility of building knowledge-based management models with high planning and executive authority. Contrarily, when that perception is absent, the urban system is not visible (or understandable) as a whole and the fragmentation of decisional capacities turns to be an implicit, though consistent political pattern.

It is obvious that 'virtuous' models are not a magic effect of a 'systemic illumination' but contrario sensu, they prove that understanding the systemic nature of the intervention object (building the object) precludes fragmentation, targeted clientelism and lack of coordination to occur (building the action).

5.1. Critical interface 1: science-policy

Given the systemic nature of territories, building-up sustainable management models requires that the quality of articulations between the capacities of those who produce scientific knowledge and those who formulate public policies be improved. This integration is needed because "science-policy dialogues are the basic space of integration between understanding and action" (Gallopin, 1999:10). Setting sustainability-oriented territorial trajectories requires the construction of modes, approaches and strategies capable of addressing (i) wholeness and integrity, (ii) complexity and (iii) uncertainties by means of the gradual and continuous building-up of a semantic and instrumental field progressively shared among 'scientists' and 'politicians'.

'Science-policy' interface's difficulties and inelasticities have been extensively analysed (Owen et al., 2006; Petts et al., 2006). As many other interfaces, they occur at *boundary spaces* which connect two specific and distinctive production systems - that of knowledge and that of territorial interventions - each one with logics, rationalities and rules of their own. Both these fields present certain (and variable) degrees of relative autonomy and represent specific social spaces. While approaching / addressing complex territorial systems, each field presents its own barriers to interdisciplinary construction of knowledge and to transversal formulation of public policies, respectively (Cunill Grau, 2005). Petts et al. (2006.a) suggest that these ´field specificities' explain a great deal of 'communicational noises' which are present in the construction of boundary spaces or organizations. Together, they may create, contain, unfold and transform formal and functional contacts (such as interconnections, interactions, mediations, coordination, transferences, exchanges, feedback) but they may also have conflictive relations or, finally, be reciprocally indifferent.

'Perverse' examples deploy all of these types (especially the last two ones). Participants of 'virtuous' examples learnt how to exercise the first type, by negotiating their divergences/ contradictions/ conflicts and by actively avoiding indifference.

In order to be effectively built-up, science-policy interfaces should be supported by communications instruments that may effectively operate as connectors (Star & Griesemer, 1989; Bowker & Star, 1999). In the limit, the interactions that this boundary object may probably enable and support will contribute to (i) perceiving and understanding the system's wholeness; (ii) identifying critical nodes along causal processes of unsustainability; (iii) proposing, generating, evaluating, defining and

formulating strategic trajectories towards urban sustainability and (iv) building the appropriate management model and the adequate organizational formats for steering those trajectories into the future of cities.

5.2. Critical interface 2: connecting States' fragmented jurisdictions and sectors.

The lack of systemic perceptions of regions is a pre-interdisciplinary approach to the way 'real territories' evolve. It has already been argued that these 'traditional' organizational formats hinder transversal institutional interactions, for they were originally conceived for not (actually) interacting but rather for gathering the most expert specialists in a given knowledge or technical area. Organizational formats reflect, express and mirror those perceptions. Thus, building transversal interactions is a highly complex endeavour. Both the construction of 'rules of the game' that regulate relations among social actors (i.e. governance) and that of the organizational settings for managing transitions towards sustainability, pertain to the dialectics of decisional– and hence, political – fields. Consequently, building new capacities, orientations and inter-institutional connections is also a political knowledge and intervention object, which starts by un-learning a great deal of what has already been learnt in terms of resource combinations, and culminates by inventing new modes for re-constructing the territorial integrity which turns more suitable for specific urban/ regional problems' nature and scale.

Given that (i) these modes have scarce 'virtuous' models to learn from; (ii) that key drivers of 'virtuous' models are often based on unique and unrepeatable time-specific combinations of local circumstances and actors and (iii) that their construction will take learning time, it follows that *continuous and progressive building processes, conducted through successive approximations by local/regional actors who participate in communities of practice might be more effective in establishing sustainable management models for territorial sustainability.* Based on the precedent critical analyses, we argue that in order to be effectively put in place, these management models should (i) be continuously built-up through successive approximations (instead of being 'decreed', 'commanded', 'recommended', 'established' or 'designed'); (ii) attempting to understand the factual connections between territorial processes which occur in very diverse domains and are ruled by specific rationalities; (iii) fostering the construction of interfaces (i.e., learning networks, communities of practice, common boundaries) within and between the fields of production of scientific knowledge, policy formulation and territorial management; (iv) supported by adequate communication instruments that continuously feed into the knowledge-action circuit; (v) thus enabling involved stakeholders to identify and program appropriate strategic interventions; (vi) actively involving political authorities at the highest possible level, as it may correspond; (vii) in specific local-regional territorial settings, according to the nature and scale of the different territorial objects to be intervened upon; (viii) in order to define 'what is required for this to happen', 'who does it', 'how' and 'with whom'.

Somewhere amidst the construction of the object and the construction of the action, a key task ahead is the construction of the collective actor.

Bibliographic references and sources

1. Bowker, G. C., & Star, S. L. (1999). Sorting Things Out: Classification and Its Consequences. Cambridge, MA: MIT Press.
2. Cunill Grau, N. (2005) La intersectorialidad en el gobierno y gestión de la política social. Diálogo Regional de Política del Banco Interamericano de Desarrollo, BID. Washington.
3. Domnanovich, R. y Agost, L. (2008) Institucionalidad de la gestión frente a la planificación urbana y la movilidad en la ciudad de La Plata. Documento de trabajo N° 5, Programa Sustentabilidad Urbana, IDEHAB, FAU, UNLP, mimeo.
4. Guston, D., Clark, W., Keating, T., Cash, D., Moser, S., Miller, C., Powers, C. (2000), Report of the Workshop on Boundary Organizations in Environmental Policy and Science. Rutgers, Harvard. http:// environment. harvard.edu/gea.
5. Herzer,H., Caputo, M.G., Celis, A. et al. (2004) Gestión de riesgos de desastre ENSO en América Latina, INFORME FINAL IAI 2004 ENSO-ARGENTINA, CENTRO estudios sociales y ambientales. Buenos Aires
6. Gallopín, G.C. 1999. "Generating, Sharing and Utilizing Science to Improve and Integrate Policy". The International Journal of Sustainable Development: Special Issue: "Science and Sustainable Development ". 2(3): 397-410.
7. Karol, J., Suárez, P. (2007) Adaptación al cambio climático, estructuras fractales y trampas discursivas. De la construcción del objeto a la construcción de la acción. Medio Ambiente y Urbanización, Vol. N° 67, IIED-AL, Buenos Aires.
8. Lara, Albina (2005) Desastres naturales: una oportunidad para el desarrollo. El caso de la inundación de Santa Fe 2003, Realidad, Revista

del Cono Sur de Psicología Social y Política. Univ. Argentina John F. Kennedy.
9. Martín,M, Araujo, D., Venturuzzi, G (2004), Vulnerabilidad Institucional, La gestión de la Información, Planificación y ejecución presupuestaria. Los 300 días en los que el Sistema Federal de Emergencias funcionó. La experiencia desarrollada entre julio de 2001 y abril de 2002. Presentación en la Escuela de Guerra, Buenos Aires, Mayo
10. Morin, E. (1999) L'intelligence de la complexité, 43-77 L'Harmattan, París, 43:77
11. Natenzon, C., Viand, J., (2005). Gestión de los desastres en Argentina. Instituciones nacionales involucradas en la problemática de las inundaciones. Mesa Redonda "Manejo integrado, risco e vulnerabilidade social" EGAL, PIRNA , Instituto de Geografía, FFyL – UBA
12. Owens, S., Petts, J. , Bulkeley, H. (2006) Boundary work: knowledge, policy, and the urban environment, Environment and Planning C: Government and Policy, Vol. 24, 633: 643
13. Petts, J., Owens, S. y Bulkeley, H. (2006) Crossing boundaries: interdiscipline in the context of urban environments, Science Direct. Geo Forum
14. Star, S.L., Griesemer, J. R. (1989). Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. Social Studies of Science, 19, 387-420.

The author is a founding member of TAG - UNLP/CONICET Research Group. He serves as Senior Researcher and member of the Steering Committee at IIPAC – Built Environment Policy Research Institute - and Full Professor of Territorial Planning at the School of Architecture and Planning, Universidad Nacional de La Plata, Argentina. His current research interests are focused on the role of Science-Policy formulation interface in the building-up of effective territorial management models and, simultaneously, on the numerical experimentation of alternative strategies and policies to orient transitions towards more sustainable territories.